

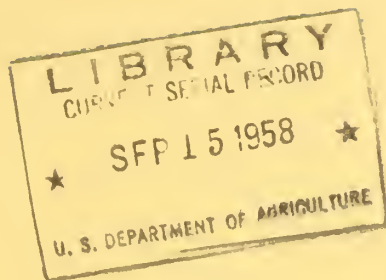
Historic, archived document

Do not assume content reflects current
scientific knowledge, policies, or practices.



Revere
A31.3
R31A2

ARS-23-8-9-c



* - *

FEDERAL-GRANT RESEARCH

at the

STATE AGRICULTURAL

EXPERIMENT STATIONS

Projects on-

FOOD SCIENCE AND TECHNOLOGY

Part 9, Section c

Food Quality and Standards,
Acceptance, Preference, and Marketing

Agricultural Research Service
UNITED STATES DEPARTMENT OF AGRICULTURE

Compiled March 1958 by

the State Experiment Stations Division, Agricultural Research Service, U. S. Department of Agriculture, Washington 25, D. C., for use of workers in agricultural research in the subject-matter areas presented. For information on specific research projects write to the Director of the Station where the research is being conducted.

Issued August 1958

FEDERAL-GRANT RESEARCH

at the

STATE AGRICULTURAL EXPERIMENT STATIONS

Projects on

FOOD SCIENCE AND TECHNOLOGY

Section c: Food Quality and Standards, Acceptance,
Preference, and Marketing

Contents

	Page
I. FOOD QUALITY AND STANDARDS.	1
Quality Control and Evaluation.	1
Quality and Quality Maintenance	4
A. Raw Material Quality.	4
B. End-Process Product Quality	20
C. Stored Product Quality.	24
II. FOOD ACCEPTANCE, PREFERENCE AND MARKETING	28
General	28
Marketing Research, Demand and Preference	31
Marketing Organization, Function and Costs.	38
III. REGIONAL RESEARCH, INCLUDING STATES WITH CONTRIBUTING PROJECTS	42
IV. LIST OF SUBJECT-MATTER AREA COMPILATIONS.	Attachment

INTRODUCTION

This compilation is one of a series providing information on State agricultural experiment station research supported by Federal-grant funds appropriated annually by Congress under authorization of the Hatch Act of 1887, as amended and approved Aug. 11, 1955, and Section 204(b) of the Agricultural Marketing Act of 1946. It is prepared for use by research workers in the subject-matter areas presented. Only that part of each State's research program supported by Federal-grant moneys is included.

In addition to the Federal-grant moneys, the State experiment stations receive some Federal support through cooperative agreements or contracts with the U. S. Department of Agriculture. Information on such research, along with other departmental research, is available in the Central Project Office, Agricultural Research Service.

A substantial part of each State agricultural experiment station's research is supported with moneys appropriated by the respective State or Territorial Legislatures and through other forms of private and public financing. Information on current agricultural research at the stations which is not financed under the Federal-grant program or through USDA cooperation can be obtained from experiment station directors.

The information given in the series of Federal-grant compilations includes the title and objectives of each Federal-grant project pertaining to the subject given on the cover. The identification of each project gives the department(s) conducting the research, the station number of the project, and the number of the regional project if it is a contributing project.

Relevant regional projects, if any, appear at the end of the compilation. States having projects contributing to regional projects are indicated. The Roman numeral (and capital letter) refer to the location in the summary of the contributing project title and objectives. The States are grouped into four major regions. These are designated NC-North Central, NE-Northeastern, S-Southern, and W-Western. The capital letter "M" following the letters for the region indicates regional marketing projects.

FOOD SCIENCE AND TECHNOLOGY, Section c

FOOD QUALITY AND STANDARDS

Quality Control and Evaluation

- Conn. Relation Between Conductivity of Apples and Flavor. To compare conductivity at harvest of apples treated with different pesticides, and flavor evaluation of the fruit by taste panels.
Ent. 316 (NE-15) (Also see Part 7, Section d.)
- Fla. Evaluation of Factors Determining Celery Quality. To determine relationship of objective measurements of celery quality to subjective evaluations and study influence of storage conditions on celery quality.
Food Tech. and Nutr. 808
- Kans. Micromasurements of Physical Grain Properties. To (1) develop and modify microradiographic technics and metallurgical hardness testing methods to permit rapid microdetermination of hardness and density of wheat kernels, and (2) correlate these measurements with those technological properties of wheat and wheat products of concern to agriculture and the flour milling industry.
Phys., Flour and Feed Milling Indus. 478
- Md. Development of Objective Grades and Standards and Quality Control Methods for Vegetables. To (1) develop reliable objective indices of quality for vegetable products; (2) utilize above methods as bases for impartial grades and standards, which will be equitable to growers and buyers; and (3) utilize above methods in quality control procedures in harvesting, marketing, and processing of vegetable crops.
Hort., Agr. Engin. Q-58-f (NEM-18) Coop. AMS
- Mich. The Development of Improved Consumer Grades for Agricultural Products. To determine factors used by consumers in identifying product quality and ways by which the factors can be incorporated into practical consumer grades and thereby improve the function of grades in the marketing system.
Agr. Econ. ES 291
- Mo. Development of Improved Methods of Pork Carcass Evaluation. To develop improved methods of pork carcass evaluation.
Anim. Husb. 88

- Mo. Economic Significance of Pork Grades in Relation to Consumer Acceptability Performance Among Retail Cuts. To determine if consumer preferences would justify sale of pork primal cuts from various grades of pork carcasses at different prices per pound by studying (a) what proportion of consumer population detects a difference in eating satisfaction between grades, (b) grade preferred by consumers, (c) economic significance of preferences, (d) if consumers can identify grades, (e) merchandising potentialities of various grades, and (f) effect of processing in relation to consumer preference.
Agr. Econ., Anim. Indus., Home Econ. ES 364
- Nebr. Studies of Flour and Baking Quality Factors by Methods Involving Fractionations and Recombinations of Protein, Starch, and Other Flour Components. To determine the extent to which various individual fractions of flour, starch, protein, and other components, respectively, influence flour baking behavior and hence the industrial utility of wheat.
Biochem. and Nutr. 129
- Nebr. Beef Carcass Evaluation. To learn (1) factors contributing to carcass desirability and their relative importance; (2) relation between economically important carcass traits and measurable differences in live animal characteristics; and (3) factors that contribute to consumer selection of different retail cuts.
Anim. Husb., Agr. Econ. 541 Coop. ARS
- N. J. Chemical Factors Influencing the Cooking and Freezing Quality of Potatoes. To learn (1) ways of increasing solids content of potatoes, and (2) if total solids alone influence quality or if an imbalance of chemical components cause poor quality.
Food Technol. 276
- N. Mex. Evaluation of Indices of Maturity in Apples. To (1) learn certain physical and chemical changes of maturing apples under New Mexico conditions, and (2) evaluate certain indices of maturity in order to learn correct time of harvesting fruits for maximum keeping quality.
Hort. 23
- N. C. Techniques for the Objective Evaluation of Pork and Beef Carcasses. To (1) develop techniques useful in appraising pork and beef carcasses, and (2) appraise some of present objective methods now in use for meat quality evaluation.
Anim. Indus. HM-12 Coop. USDA

- N. Dak. Durum Wheat Quality Evaluation for Consumer Acceptance.
To insure that new wheat varieties developed for resistance to current plant diseases, particularly the 15B rust complex, will be readily accepted by the consumers, and to develop new criteria of durum quality.
Cereal Technol. 10-4
- Ohio Development of Methods for Evaluating Quality of Fresh and Processed Fruits and Vegetables. To (1) develop new methods for quality evaluation of fresh and processed fruits and vegetables, using both subjective and objective techniques; and (2) compare quality evaluations secured by newly developed procedures with those from commonly employed techniques.
Hort. 29
- Ohio Relation of Processing Technique and Chemical Composition to the Quality of Potato Chips. To determine (1) to what degree chemical differences in potatoes are correlated with quality of chips, and (2) if differences in quality found in potatoes shortly after harvest are present a month after cool storage and after a following month of warm storage.
Hort. 122-3
- Okla. Development of Objective Criterion for Beef Evaluation.
To develop (1) objective criteria for evaluation of beef, and (2) tools for use in objective evaluation of beef.
Anim. Husb. 998 (SM-19) (Also see Part 14, Section c.)
- P. R. Methods for Evaluating and Grading Rums for Different Markets to Meet Consumer Preferences. To (1) develop lab analytical procedures for quality appraisal of rums; (2) study tasting procedures possible in evaluating consumer preferences for rums in different market areas; and (3) study correlations existing between consumer preference data, and chemical and physical properties of rums.
Rum Pilot Plant 50
- Utah Chemical Techniques for Detecting Flavor Changes During Meat Processing. To (1) develop chemical techniques for rapid and reliable evaluation of flavor of processed meat, and (2) correlate chemical techniques for evaluating flavor of same with organoleptic test on man.
Foods and Nutr., Chem. 458

Va. The Effect of Different Methods of Feeding on the Patterns of Growth and Carcass Composition of Cattle and the Evaluation of Techniques and the Development of New Techniques for Studying Carcass Composition. To (1) learn carcass composition by dissection and chemical analysis of cattle on different methods of feeding at various ages and weights, and (2) evaluate and develop techniques for use in live animal indicative of carcass composition--live animal probe as a measure of fatness, body water in vivo and its relationship to carcass composition.

Biochem. and Nutr., Anim. Husb. 86071

Wash. Comparative Carcass Evaluation, Marketing Differentials, and Consumer Acceptance of Meat and Fat Type Hogs. To (1) determine by laboratory methods the component proportions of lean, fat, and waste in carcasses of meat and fat type hogs at slaughter weights associated with common market grades; (2) evaluate at packer and retail level the processing costs and wastes associated with selected slaughter weights for both types of hogs; and (3) test consumer acceptance and market response to selected cuts from carcasses of different weight groups for both types of hogs at (a) same prices, and (b) different prices.

Agr. Econ., Home Econ., Anim. Husb. ES 399

Wis. Quality-Price-Yield Relationships of Sweet Corn for Processing. To (1) determine relationship of prices and pricing methods of raw sweet corn to quality and yield at farm level; (2) determine relationship of prices and pricing methods of raw sweet corn to quality and yield of canned sweet corn; and (3) evaluate present methods of selling raw sweet corn by growers to processors.

(Dairy and Food Indus., Agron., Agr. Econ. 900 (NCM-13)
(Also see Part 14, Section b.)

Quality and Quality Maintenance

A. Raw Material Quality

Ark. The Maturity of Peaches in Relation to Handling and Consumer Acceptance. To determine (1) and set up guides for harvesting peaches at various stages of maturity; (2) carrying qualities of peaches at various stages of maturity, under various treatments, for various type containers, shipping methods and distance to market; and (3) market and consumer acceptance for various stages of maturity and types of containers.

Hort. and For. 354

- Ark. Determination of Effect of Insecticides on Plants and Soils, Including Bio-assay of Residues. To determine bio-assay methods of determining insecticide residues on crops and in soil to evaluate effects of insecticides, solvents, diluents, and formulations on plant growth, harvest residues and after effects in the soil.
Ent. 370 (S-22) (Also see Part 7, Section d.)
- Ark. Breeding and Selecting Pickling Cucumbers. To (1) develop a high yielding, bunch bearing variety resistant to downy mildew and anthracnose possessing pickling qualities of firmness retention in salt process, dark green color, desirable shape, tender rind, and slow seed development; and (2) make study of blossom retention as it relates to softening in salt curing processes.
Hort. and For. 429 Coop. USDA
- Ark. Effect of Pre-slaughter Handling and Treatment on Carcass Quality and Market Value. Study methods for improving value of meat produced thru management of stock during pre-slaughter period and after completion of farm feeding period.
Anim. Indus. and Vet. Sci., Agr. Econ. and Rural Sociol. 446
- Colo. The Use of the Somascope and/or Other Physical or Chemical Means for Improving the Accuracy of Determining Market Grades in Live Slaughter Cattle. To (1) determine depth and distribution of fat on live slaughter cattle and if any relationships exist between finish of same and their carcass grade and/or qualities of meat when cooked; (2) establish objective grade specifications based on finish and other characteristics for use with somascope and other chemical means of grading and test to see if these are feasible and economically efficient means; and (3) investigate specific gravity as a procedure for measuring marbling of selected muscles and relationship of marbling with carcass grade and quality of cooked beef.
Anim. Indus. 27
- Colo. The Improvement of Canning Tomatoes. To (1) develop by hybridization a new early bearing variety or hybrid for Northern Colorado that will meet requirements for canning, and (2) test field seeding methods, improved fertilization practices' techniques.
Hort. 42
- Colo. The Effect of Various Fertilizers, Minor Elements and Soil Amendments on the Yield, Grade, Color, Cooking Quality and Keeping Quality of Potatoes. To (1) determine the soil factors influencing skin color tuber type, yield, size, and quality of red potatoes in the San Luis Valley; (2) study the effect of soil applications of different types; and (3) develop a control method.
Hort. 45

- Del. Chemical Changes that Occur in the Pectins of Fruits and Vegetables in "Fresh Market" Channels. To (1) establish chemical changes which occur from time fruits and vegetables are harvested until sold; (2) establish a physicochemical basis for the changes in quality which occur during marketing; and (3) develop practical measurements and means of preserving quality in fruits and vegetables following harvest.
Agr. Chem. 27-C
- Fla. Maturity as Related to Quality of Tomatoes for the Fresh Market. To determine the effects of maturity on market quality of tomatoes and to improve the methods of grading for maturity.
Food Technol. and Nutr. 641
- Fla. Relationship of Heredity to the Ripening Performance of Tomatoes. To determine differences in ripening behavior and marketability of varieties and strains of tomatoes during the ripening processes.
Veg. Crops 642
- Fla. Effect of Various Levels of Fertilizers on Sweet Potato Production. Study effects of rates of fertilizers on yield and quality of sweet potatoes.
Veg. Crops 681
- Fla. Effect of Climatic Factors on Insecticide Residues on Vegetable Crops. Learn extent to which climatic factors as sun, rain, and wind affect insecticidal residues on certain vegetables.
Ent. 746
- Ga. Susceptibility of Various Strains of Spanish Peanuts to Rancidity Development. To (1) determine susceptibility of various strains of Spanish Peanuts to oxidative rancidity development, and select less susceptible strains for production of this type; and (2) isolate and characterize factor or factors that are responsible for the difference in susceptibility of various types to oxidative rancidity development.
Chem., Plant Path. 63
- Ga. Study of the Marketing Quality of Pecans and Pecan Products. To learn (1) influence of conditions in orchard on marketing quality of pecans; (2) influence of methods of shelling pecans on quality of pecan products; (3) effect of chemical composition of pecans on stability of pecans and pecan products and effect of adding antioxidants, hydrogenated fats, lecithin, etc.; (4) influence of methods of packaging shelled and unshelled pecans on stability of pecan products.
Hort. M-77 Coop. ARS

- Ga. Improvement of Sweet Potato Varieties for Table Purposes Through Breeding. To obtain, thru breeding or introduction, sweet potato varieties which have superior yielding ability, higher market and nutritive values, greater disease resistance and better adaptability for specific uses than presently known kinds.
Hort. 89
- Idaho Effect of Some Dietary Supplements on Cost and Yield of Edible Portion of Pork, and on the Frozen Storage Life of Pork. To study from consumer standpoint the effect of feeding alpha-tocopherol and an antibiotic alone and in combination on (1) cost of production and yield of edible portion of pork, including ratio of fat to lean; and (2) development of rancidity in frozen pork.
Home Econ. 271
- Ill. The Magnitude, Character, and Persistence of Insecticide Residues on or in Food, Feed, and Forage Crops. To isolate, define, and evaluate important factors that influence or determine the magnitude and/or persistence of insecticide residues on or in plants and animals.
Ent. 12-312 (NC-33) Coop. USDA (Also see Part 7, Section d.)
- Ill. Factors Affecting Quality of Beef Carcasses. To (1) study validity of measures of quality as currently used by beef trade; (2) develop precise objective measures of factors which contribute to beef quality; and (3) relate factors which contribute to carcass quality to those which can be measured easily in live animals.
Anim. Sci., Agr. Econ. 20-371
- Ind. Breeding and Evaluation of New Varieties and Hybrids of Tomatoes for Processing in Indiana. To (1) breed new varieties and hybrids with improved disease resistance, quality, handling characteristics, yield, and ability to set under high temperature conditions, which are early and suitable for processing; (2) breed new adapted, paste-type varieties and hybrids for use in tomato products; (3) breed new varieties and hybrids suitable for machine harvesting; (4) learn responses of new varieties and hybrids to soil type, fertility, spacing, and planting methods under State conditions; and (5) evaluate "synthetic" varieties in direct seeding.
Hort., Bot. and Plant Path. 952

Ind. Quality-Yield-Price Relationships in Marketing Fresh Tomatoes. To (1) develop methods for evaluating quality; (2) determine quality of fresh tomatoes available on market thru year in State and in North Central States; and (3) determine quality-yield-price relationship of tomatoes for fresh market as influenced by different varieties, cultural practices, stages of maturity at time of harvest, grading, packaging, and methods of handling during marketing.

Hort. 984 (NCM-24) (Also see Part 14, Section b.)

Iowa Improvement of Vegetable Crops for Canning Through Breeding.
1. Tomatoes--To (1) use hybrid vigor to improve yields and quality, (2) transfer morphological sterile character to varieties showing high combining ability, (3) improve internal color, (4) develop environmental and genetic cracking resistant lines, (5) improve disease resistance, and (6) determine effect of above factors on quality; 2. Lima Beans--To develop large seeded high quality type resistant to heat conditions; and 3. Cucurbits--To (1) incorporate vine borer resistance of moschata species in maxima species, and (2) develop lines with desirable maturity, shape, consistency, and flesh color.

Hort., Bot. and Plant Path. 1106

Iowa The Influence of Dietary Supplementation Selection and Breeding on Carcass Quality and Tissue Composition of Meat Animals. To determine (1) effects of protein, fat, antibiotics, trace minerals, calcium and phosphorus of swine rations on carcass quality and tissue composition; (2) effect of roughage, protein, and protein substitutes, and hormones on quality of lamb and beef carcasses; and (3) make additional studies, largely biochemical, to support objectives above.

Anim. Husb. 1239

Kans. The Influence of Environment on the Varietal Quality of Hard Red Winter Wheat. To determine the influence of environment including meteorological and agronomic variables on the quality characteristics of a number of varieties of hard red winter wheat.

Flour and Feed Milling Indus. 60

Kans. Meat Investigations--Influence of Feeding Antibiotics on Carcass Quality of Hogs. To determine manner of growth and fat deposit resulting from feeding antibiotics to growing fattening pigs by making detailed carcass studies of hogs fed antibiotics.

Anim. Husb., Chem., Home Econ. 217

- Kans. The Effects of Implanting Stilbestrol in Feeder Lambs and Feeding a Stilbestrol Premix to Feeder Lambs upon the Quality and Palatability of the Carcass. To obtain information regarding body changes when stilbestrol is implanted in or fed to feeder lambs.
Anim. Husb., Chem., Home Econ. 423
- Kans. Biochemical and Physiological Factors Which Influence Wheat Quality. To determine the biochemical and physiological factors in wheat which affect its quality for utilization.
Flour and Feed Milling Indus. 506
- Ky. The Comparative Processing and Shipping Qualities of Strawberry Varieties and Selections. To determine processing and shipping qualities of fruit of four varieties of strawberries grown in State and of selections from breeding program.
Hort., Agr. Econ., Anim. Indus. 1002
- La. Comparing Promising Sweet Potato Seedlings with Standard Varieties for Market and Industrial Uses. To develop a variety that is superior to Puerto Rico variety by (a) determining optimum conditions for production of promising material that is now available, and (b) working with table varieties in preference to industrial use varieties.
Hort., 417
- La. Physiological Processes Involved in Seasonal Changes in Egg Quality. To determine (1) effects of controlled temperature and age of birds on egg shell quality, interior egg quality, and production; (2) Basal Metabolic Rate, Alkaline phosphatase activity of blood and effect of controlled temperature on these factors; and (3) degree of association between egg quality measurements and Basal Metabolic Rate or Alkaline phosphatase.
Poultry Indus. 870
- La. Production, Breeding and Handling of Tree and Small Fruits with Particular Reference to Figs, Pears and Miscellaneous Fruits. To assemble and evaluate existing varieties in Louisiana; improve these varieties through breeding and test them on various markets for fresh and processed fruits.
Hort., Food Technol. 822 Coop. USDA
- Maine Effect of Pesticides on Quality of Fruits and Vegetables. To determine by sensory techniques the effects of some pesticides on quality (particularly flavor) of selected Maine-grown fruits and vegetables, and evaluate and improve organoleptic methods for learning quality (flavor, texture, color, odor) of fruits and vegetables.
Hort., Ent., Bot. and Plant Path. 28 (NE-15) Coop. ARS
(Also see Part 7, Section d.)

Maine

Effect of Fertilizers, Liming, and Cultural Treatments on Crops for Processing. To (1) further study amounts and ratios of fertilizer needed to produce large yields of high quality processing crops; (2) further study amounts of liming materials needed to maintain given pH and calcium levels in soil without increasing incidence of potato scab and the effect of these different levels on yields; (3) determine most efficient placement of small amounts of lime and effect on yields; (4) study most efficient placement of fertilizer and proper time of application in rotation; (5) determine best seeding rates for peas, sweet corn, and beans, and proper spacing of broccoli plants commensurate with highest yields of processing materials; (6) study effects of side-dressing applications with N at various times upon growth and quality of beans, sweet corn, and broccoli; (7) study and improve planting, cultivation, and harvesting practices for processing crops; (8) determine adaptability of new varieties for processing in Maine; (9) study effects of growth regulators and nutrient sprays on maturation and fruit-setting in beans and peas; (10) evaluate effect of harvest date on yield and quality of beans and peas; (11) determine if early removal of primary head of broccoli can be done without reducing yield; and (12) study effect of field freezing on broccoli quality.

Hort., Agron. 74

Mass.

Effect of Pesticides on Quality of Fruits and Vegetables. To (1) develop effective methods for detecting differences in flavor which may be caused by pesticides applied to fruits and vegetables before harvest; (2) determine if flavor differences are due to pesticides per se, to decomposition products of pesticides, or changes in food product itself caused by physiological response of plant to the chemical; (3) correlate pesticide or decomposition product residuals with organoleptic analyses; and (4) determine taste threshold values of pesticides and/or their decomposition products.

Food Technol. 71 (NE-15) (Also see Part 7, Section d.)

Mass.

The Effect of Handling, Processing and Chemical Treatment on the Shelf-Life and Quality of Fresh Vegetables. To develop methods of processing and packaging prepeeled squash, turnips, parsnips, and onions to ensure adequate shelf-life and optimum quality.

Food Technol. 132 (NEM-18)

- Mass. The Effect of Handling, Processing and Chemical Treatments on the Shelf Life and Quality of Prepeeled Potatoes and Frozen Potato Products. To study (1) possibility of replacing all or part of the sulphite treatment necessary to control discoloration; (2) use of Cryovac bags as a replacement for polyethylene and the biochemical problems associated with respiration phenomena; (3) role of antibiotics in reducing exudation and extending the shelf life of prepeeled potatoes; and (4) effect of variety, maturation processing, and handling on quality of several precooked, frozen, potato products.
Food Technol. 157 (NEM-20) (Also see Part 14, Section b.)
- Mich. The Relationship Between Growth, Feed Efficiency, and Carcass Characteristics. To (1) determine variation in feed efficiency between hogs by individual feeding methods; (2) effect of feed restriction on efficiency and carcass characteristics; and (3) study methods of restricting feed intake.
Anim. Husb. 42
- Mich. Cause and Prevention of Egg Yolk Discoloration Resulting from Feeding Cottonseed Oil to Laying Hens. To determine (1) prevention of pink whites and salmon yolks by feeding the hen possible antagonists to the causative substance in crude cottonseed oil; (2) isolation and characterization of the substance in crude cottonseed oil that causes discoloration; (3) inactivation of or the removal of causative agent from crude cottonseed oil; and (4) mode of action of causative substance on the yolk membrane.
Agr. Chem. 63
- Mich. Minimizing Quality Losses of Poultry Meat Products in Market Channels. To determine (1) factors affecting decline in poultry meat quality during processing and storage; (2) variation in initial quality and changes occurring in quality of meat obtained from chickens had received newer feed ingredients; and (3) variations in initial quality and changes in quality of meat from chickens which had received dosages of commonly administered hormone substance and drugs.
Poultry Husb., Home Econ. 100 (NCM-7)
- Minn. Factors Affecting Market Quality of Beef Cattle Carcasses. To (1) determine effects of stilbestrol on beef carcas quality; (2) determine market value of carcasses from cattle having been fed stilbestrol; (3) relate characteristics concerning market quality of beef carcasses to such production factors as growth rate, rations, and feed use; (4) compare moisture and fat content samples from carcasses; and (5) determine cooler shrinkage on the carcasses.
Anim. Husb. 1413

- Miss. Snap Bean Breeding and Quality Studies. By breeding, develop bush and pole beans having high yielding ability, dark green color, low fiber content, slow rate of seed development, pod length 5 to 6", pods that retain form and do not discolor the liquid in the can.
Hort. HK-14 Coop. USDA
- Miss. Studies of Problems of Production and Marketing Grapes in Mississippi with Special Emphasis on the Muscadine Type. To (1) determine best varieties to grow for marketing fresh and for processing; (2) develop methods of harvesting, handling, and marketing fresh muscadine grapes successfully; (3) determine or develop best methods of processing grapes that can be marketed at a profit to the grower; (4) find bunch varieties of good quality suitable for State growing conditions; and (5) determine effect of certain cultural treatments on yield and quality of grapes.
Hort. HK-22
- Mo. Nutritive Requirements of Swine- The Influence of Plane of Nutrition on Carcass Desirability in Swine.--To determine effect of good quality pasture combined with a limited grain ration on production costs and carcass quality of market hogs.
Anim. Husb. 141-d
- Mo. Effect of Antemortem Handling During Marketing on Subsequent Carcass Quality of Beef. To study influence of exercise, rest, feeding and other factors which may produce shock in the live animal and a loss in quality in the resultant beef carcass.
Anim. Husb. 238
- Nebr. Wheat Evaluation Studies. To (1) determine comparative merits of commercial and experimental varieties of winter and spring wheat for culture in Nebraska; (2) evaluate in appropriate uniform tests varieties developed in neighboring States as to performance and possible use in Nebraska; (3) evaluate strains for market acceptability; and (4) make limited quantities of foundation seed available for further increase from time to time.
Agron. 213 Coop. ARS
- N. H. Factors Influencing the Market Quality of Eggs on New Hampshire Farms. To determine (1) influence that shell characteristics, temperature, humidity and holding period have upon market quality and hatchability of eggs on New Hampshire farms; and (2) spoilage causing microbes and their route of entry into unmarketable eggs.
Poultry Husb. 81

- N. J. Pilot Scale Precooling Studies with Certain Fresh Fruits and Vegetables and Shipping Quality Characteristics of New Jersey Blueberry Varieties. To (1) evaluate hydrocooling (with new test chemicals) on quality maintenance of strawberries, lettuce, peaches and snapbeans under controlled lab conditions; (2) evaluate vacuum cooling on quality maintenance of lettuce and other produce under controlled lab conditions; (3) study economic feasibility of vacuum cooling and hydrocooling under State conditions; (4) evaluate shipping quality characteristics of blueberry varieties under controlled lab conditions and in test shipments to distant markets; and (5) evaluate air blast cooling process on quality maintenance of berries under controlled pilot scale operations.
Agr. Econ., Food Technol., Plant Path. 28
- N. J. A Study of the Influence of Pesticides, Fertilizers, and Other Agents on the Flavor of Fresh, Canned, and Frozen Foods. To provide the Plant Pathology and Entomology Departments and the New Jersey Canners Association with information on the influence of certain pesticides on flavor of fresh and canned foods.
Food Technol. 286
- N. J. Quality Maintenance and Prepackaging in Marketing New Jersey Fresh and Processed Vegetables. To develop a more efficient, objective, and uniform method of learning quality and off-flavors of fresh and processed vegetables.
Food Technol. 290 (NEM-18)
- N. J. Influence of Environment and Cultural Practices on Tomato Maturity, Yield and Quality. To (1) initiate early flowering in fresh market and commercial canning varieties; (2) develop a practical method of forecasting time of maturity; (3) establish relationships of several elements of climate to tomato fruit production and quality by means of correlation analyses; and (4) develop a practical method of storing seedlings to accomplish vernalization and at same time make available more greenhouse or frame space.
Hort. 357
- N. J. Sweet Potato Storage Investigations. To determine effect of various temperatures and humidities during the curing period on the incidence of several diseases affecting sweet potato during storage period and to consider effect of environmental factors occurring during holding period on keeping qualities and of increasing CO₂ and O₂ concentrations in storage house air.
Plant Path. 461

- N. J. Factors Influencing the Storage Life of Apples. To determine factors (1) related to occurrence of apple scald; (2) affecting moisture loss and nest rot; and (3) operative under storage conditions affecting storage life.
Plant Path. 478
- N. Y.
(Cornell) Means of Improving the Meat Quality of Slaughter Dairy Cows.
To determine effects of estrogen treatments on slaughter dairy cows of advanced age during a 6-8-week feeding period.
Anim. Husb. 67
- N. Y.
(Cornell) Factors Affecting Market Quality of Table Eggs. A. Determine Effect of Carbon Dioxide on the Thinning of Egg Albumen; B. Determine the Cause of Shell Mottling and its Effect on Internal Quality; C. A Study of the Bacteriology of Eggs; D. Determine the Effect of Various Feed Additives on Interior and External Egg Quality.
To (1) determine if an atmosphere with higher than normal amounts of CO₂ will slow down thinning of albumen; (2) determine basic cause of shell mottling, importance of shell thickness and porosity on incidence of mottling, if there is a correlation between internal quality and egg shell mottling; (3) study bacteria affecting egg quality with emphasis on ecology and physical and chemical factors involved in penetration of egg and learn method of control; and (4) study influence of additives to feed for specific purposes on other factors of economic and scientific importance, and determine effect on egg quality and levels at which quality is affected.
Poultry Husb. 146
- N. Y.
(Cornell) A Study of Production Factors Affecting Processing Quality and Culinary Quality of Potatoes. To develop improved methods of producing potatoes which will result in potatoes of better processing and table quality.
Veg. Crops 216
- N. Y.
(State) The Market Quality, Including Physical and Chemical Measurements in Relation to Maturity and Yield of Vegetable Crops Grown for Processing. To investigate (1) returns from peas when harvested at different stages of maturity; (2) relation between heat units accumulated during the growing period and tenderometer reading; and (3) yields and net returns from tomatoes harvested at the immature stage for green-wraps as compared with the red-ripe stage for canning. To obtain data on the relation between increasing rates of seeding and increased yields of small beets and determine optimum seeding rate to produce largest net returns.
Veg. Crops, Food Sci. and Technol. 4

N. Y.
(State)

Development of Improved Strains of Canning Crop Vegetables.
1. Breeding of Heat-Tolerant, Root-Rot Resistant Peas for Canning and Freezing. To breed variety of peas of good quality, resistant to root rot and tolerant of heat.
Veg. Crops 16a

N. Y.
(State)

Development of Improved Strains of Canning Crop Vegetables.
2. Breeding Early Yellow Sweet Corn of High Yield and Good Quality for Canning and Freezing. To produce a superior, high yielding, early, yellow variety of sweet corn for canning and freezing.
Veg. Crops 16b (NE-32) (Also see Part 22, Section a.)

N. Y.
(State)

Breeding Adapted Sweet Corn Hybrids with Disease Resistance, High Yield, and Good Quality for Canning and Freezing. To (1) evaluate in regional cooperative trials of currently available hybrids and inbreds for disease resistance and production under State growing conditions; (2) develop effective techniques of screening for disease resistance (emphasizing bacterial wilt and smut), and cooperative evaluation of techniques in regional trials; and (3) produce regionally adapted new inbreds and hybrids using standard and newly developed breeding techniques.
Veg. Crops 66 (NE-32) Coop. ARS (Also see Part 22, Section a.)

N. C.

A Study of Certain Physiological Processes in the Sweet Potato in Relation to Curing and Storage. To (1) determine rate of suberization and wound periderm formation in moist fleshed sweet potatoes under certain curing conditions; (2) study rate of respiration in curing and storage and relation of rate of respiration to chemical quality; and (3) study evolution of oxidizable volatiles during curing and storage and determine effect of their removal on rate of respiration.
Hort. HM-13

N. Dak.

Effect of Production Practices on the Quality of Potatoes. To determine market and table quality factors as affected by: control of russet scab; skin color of red varieties; control of tuber size and second growth symptoms; tuber maturity and susceptibility to mechanical bruises at harvest as affected by skin and physiological characteristics; effects of soil type, area of production and supplemental irrigation; chemical and physical characteristics of flesh; and sprain and phloem necrosis.
Hort., Bact., Soils, Agr. Engin. 12-8 Coop. AMS

Ohio

The Development of Disease Resistant Strains of Cucumbers. To develop strains of cucumbers of slicing and pickling types which will be sufficiently resistant to mosaic and possibly bacterial wilt so that the production of the crop may again become profitable to Ohio.
Bot. 24

Ohio

Methods of Maintaining Quality in Poultry Products. B. Poultry Meat. 1. Shelf Life of Fresh Slaughtered, Unfrozen Poultry. To determine keeping quality (shelf life) of ready-to-cook cut-up poultry when: (a) poultry has been fed high level antibiotics; (b) held at different temperatures; (c) ice packed and in chilled air; (d) dipped in chlorine, antibiotic and other solutions; (e) dipped in boiling water, hot stabilized oil and adhesive dips containing germicide; (f) packaged in vented and airtight containers; and (g) repeated freezing and defrosting.
Poultry Sci. 74 (NCM-7)

Ohio

Quality Evaluation of Soft Winter Wheats. To (1) determine factors responsible for differences in quality among soft wheat strains and varieties; (2) improve and develop standards for evaluating quality of soft wheats; and (3) evaluate quality characteristics of new strains from soft wheat breeding programs of station in region.

Agron. 133 (NC-30) Coop. ARS (Also see Part 8, Section a.)

Okla.

Methods for Quality Evaluation of Small Wheat Samples. To (1) establish a satisfactory method for production of flour from small samples of wheat; (2) establish methods suitable for baking quality evaluation of flours from small samples; and (3) investigate relationships between milling and baking quality and chemical and physical properties of wheat.

Agr. Chem., Agron. 875 Coop. ARS

Pa.

Factors Affecting the Market Quality of Dressed and Drawn Poultry. To determine the extent to which flavor and market quality of freshly-killed, hard-chilled, and frozen eviscerated poultry meat are affected by (a) fattening rations fed prior to killing, (b) conditions under which the live poultry are held before killing, (c) handling conditions during dressing, and (d) storage conditions of chill and freezer rooms.

Poultry Husb., Bact., Chem., Agr. Engin., Home Econ. 1078

Pa.

The Influence of Various Fertilizers, Cultural Practices, and Agricultural Chemicals on the Quality of Fresh and Processed Fruits and Vegetables. To determine the influence of (a) inherent and environmental conditions and cultural practices on quality of fresh and processed horticultural crops, and (b) various pesticides and other agricultural chemicals on flavor and quality of fresh and processed fruits and vegetables.

Hort. 1239

- Pa. The Influence of Pesticides on the Flavor of Fruits and Vegetables. To determine influence of various insecticides, fungicides and herbicides on flavor of fresh, canned, and frozen fruits and vegetables.
Hort. 1332 (NE-15) (Also see Part 7, Section d.)
- S. C. The Economy and Rate of Gain and the Quality of Meat Produced by Steers Fattened in Dry Lot and on Winter Forage. To (1) determine relative cost of fattening steers in dry lot and on pasture with supplementary grain; (2) determine relative value of such homegrown feeds as corn, milo and barley for steers fed on forage; and (3) compare quality of beef produced by steers fattened in dry lot and those fed on pasture.
Anim. Husb. 72
- S. C. The Effect of Feeds on Color and Firmness of Beef Fat. To determine (1) effect of green forage and subsequent dry lot feeding on carotene and xanthophyll content (color) of beef fat, color of lean, firmness (iodine number) of beef fat; (2) rate of carotene and xanthophyll depletion during dry lot feeding; and (3) rate of change of unsaturated fatty acids (firmness) during dry lot feeding.
Anim. Husb., Chem. 80
- S. C. Control of the Rice Weevil and Associated Insects in Farm-Stored Corn and in Food Products Made From Such Grain. To (1) find an economical, practical method of controlling rice weevil and associated insects in farm-stored corn; (2) control insects in farm-stored corn intended for human consumption; and (3) investigate simple, practical procedures in producing clean corn meal from corn available in the State.
Ent. 104
- S. C. The Effect of Fattening Rations on Carcass Characteristics of Swine. To determine (1) relative feeding value of various farm grains; (2) effect of these rations on the carcass produced; and (3) value of winter forage in ration of fattening swine and its effect on carcass desirability.
Anim. Husb. 340
- S. Dak. Maintaining Quality of Turkey Meat in Market Channels. To (1) study possible factors which may influence keeping quality of turkeys in storage; and (2) develop methods for measuring quality.
Poultry Husb. 261-R (NCM-7)

- Tenn. Type and Breed as Factors Influencing Beef Carcass Characteristics and Consumer Acceptance. To (1) relate carcass characteristics of beef and dairy animals varying greatly in conformation to consumer preferences and acceptance; (2) compare values of retail cuts from experimental animals as evaluated at retail level with characteristics of carcasses from which they came as evaluated at wholesale level; (3) use information from above to improve standards for evaluating carcasses at wholesale level and for evaluating conformation in beef breeding stock; and (4) determine necessary inputs per pound of edible meat produced by animals varying greatly in conformation.
Agr. Econ. and Rural Sociol. 12
- Tenn. Carcass Value Investigations with Beef. To ascertain (1) possibility of developing methods for objectively evaluating quality factors in beef, and (2) effect of consumer acceptance as basis for improvement in methods of beef production and marketing.
Anim. Husb., Vet. Sci. 68
- Tenn. Quality of Frozen Snap Beans as Affected by Methods of Transportation, Processing, Duration and Temperature of Storage. To (1) ascertain most suitable varieties and proper stages of maturity of green snap beans grown for the fresh market and for commercial processing; (2) find best preparatory treatment for blanching; (3) study quality of beans as affected by duration and temperature of storage; and (4) conduct consumer acceptance studies of several varieties of beans prepared and stored under different conditions.
Chem. 86
- Tex. Swine Breeding Improvement Based on Performance. To (1) develop and standardize procedures and techniques for testing production performance of economically important characteristics in breeding and market hogs; (2) identify and develop superior lines of breeding stock as to prolificacy, weaning weight of litter, rate and economy of gain, net carcass merit, and longevity of breeding stock; and (3) determine estimates of heritability for and genetic correlations between traits.
Anim. Husb., Home Econ. 956 Coop. FES
- Tex. Breeding Commercial Shipping and Canning Varieties of Tomatoes for South Texas. To (1) study adaptability of tomato varieties to south Texas and learn which varieties further breeding and selection; (2) develop tomato varieties through breeding combining earliness, high yields, and market and consumer acceptance adapted to commercial production for shipping and for commercial canning; and (3) incorporate resistance to diseases and physiological abnormalities.
Hort., Plant Path. 1026 Coop. ARS

Utah

Carcass Characteristics and Feed Lot Performance of Three Strains of Swine Fed Various Levels of Alfalfa Meal and Barley. To study (1) influence upon carcass and on rate and efficiency of gains that result when level of alfalfa meal is varied from a low of 10% to a high of 50% with accompanying changes in barley levels; (2) interrelationship of breeding, represented by Durocs, Yorkshires, and a strain developed from a cross of the two breeds, and feeding, as associated with rations containing various levels of alfalfa and barley, upon carcass characteristics.

Anim. Husb. 461

Va.

Time and Recovery Studies in Apple Processing. To determine (1) length of time required to perform different processing operations when using apples of grades U. S. 1 and U. S. 2, in sizes 2-1/4 - 2-1/2" in diameter, 2-1/2 - 2-3/4" in diameter, 2-3/4" in diameter and over; (2) yield of peeled, cored, whole apples and of sliced apples obtained from above grades and sizes and recoverable waste from same; and (3) price differentials that processors could economically pay for apples of different qualities and sizes based on time required to perform operations and recovery experiences, learn economic feasibility of adopting proposed new quality and size standards for apples for processing.

Hort., Agr. Econ. 86033

Wash.

The Evaluation of Raw Materials for Food Processing. To quantitatively evaluate materials used in producing processed food in terms of factors which carry quality values into processed product.

Hort., Home Econ. 1152

W. Va.

Simplified Methods of Improving Initial Interior Egg Quality and Shell Quality Through Selective Breeding. To (1) determine feasibility of improving initial interior egg quality by selecting breeding hens from observations on broken out eggs; (2) find feasibility of improving egg shell quality by determining specific gravity of quantity of eggs at one time, then select hens that produce eggs with specific gravity over standard; and (3) determine possibility of reducing incidence of blood and meat spots by selective breeding.

Poultry Husb. 44

Wis.

The Varieties of Barley and Cultural Practices Dealing with the Production of Barley, and Breeding for Malting Quality: Research on Evaluation of Malting Quality of Barley. To breed new barley varieties for economical grain production and good industrial quality.

Plant Path., Agron. 530 Coop. USDA

- Wis. The Quality of Fresh and Processed Fruit as Affected by Orchard Sprays. To (1) determine effects of spray chemicals used in apple and cherry orchards on color, finish, texture, firmness, taste, and storage life of fresh and processed fruit; and (2) relate findings to preferences or needs of consumers and processors.
Dairy and Food Indus., Ent., Plant Path. 952
- Wis. Market Value and Nutritional Quality of the Meat From Livestock Receiving Stilbestrol. To determine (1) effect of diethylstilbestrol added to various rations on carcass quality, weight gains and feed efficiency of beef cattle; (2) effect of stilbestrol on nutritive value of carcass; and (3) effect of ingested stilbestrol on concentrations and distribution of fat, protein, water, vitamins, and estrogenic activity in bodies of beef cattle.
Anim. Husb., Biochem., Genet. 967
- Wis. Chemical Nature and Mechanism of Loss of Insecticide Residues on or in Food, Feed and Forage Crops. To study chemical nature of the insecticide degradation products in and on plants and evaluate their toxicological hazard.
Ent. 980 (NC-33) (Also see Part 7, Section d.)
- Wyo. The Effect of Stilbestrol on the Performance and Carcasses of Steers. To study effect of feeding stilbestrol (1) to steers on rate of gain and feed efficiency; (2) on yield, carcass grade, shrink in storage, quality, and composition of carcass.
Anim. Prod., Vet. Sci. and Bact., Chem. 599
- B. End-Process Product Quality
- Ill. The Causes and Cure of the Destabilization of Milk Proteins by Heat. To (1) prevent the loss of dairy products due to defects attributed to heat destabilization of milk proteins by finding their fundamental causes; (2) characterize electrophoretic pattern of milk proteins in normal environment; and (3) correlate patterns of various milk with their heat stability.
Food Technol. 50-343
- Ind. Quality Classification in Relation to Nutritive Value of Poultry Products. To determine (1) relation existing between grading factors and nutritive value of poultry products; (2) changes in nutritive properties of poultry products during time of marketing; and (3) effect of various processing and marketing techniques on nutritive properties of poultry products.
Poultry Sci. 961 (NCM-7)

- Kans. Insects Affecting Stored Grain and Milled Grain Products.
To (1) study biology and behavior of grain and milled grain products' insects; (2) develop methods for distinguishing insect fragments in milled grain products; (3) determine effects of new insecticides on grain infesting insects; and (4) study insect problems in farm stored grain.
Ent. 322
- Kans. The Relation of Packaging Material to the Keeping Quality of Frozen Pork. To obtain specific information on merits of different packaging materials.
Anim. Husb., Chem., Home Econ. 424
- Kans. Tenderness of Certain Beef Muscles at Several Stages During Cooking. To (1) study changes in tenderness of beef during cooking as measured by organoleptic, physical, histological, and chemical tests; (2) develop histological staining procedures specific for frozen sections of beef muscle and study methods for reading and interpreting microscopic sections; and (3) attempt to isolate effect of changes in condition of non-collagenous structural muscle protein on tenderness of beef muscle.
Home Econ. 479
- Ia. Market Quality as Determined by Carcass Composition of Broilers. To (1) determine effect on market quality of differences in percentage of moisture, fat, protein, and ash in broilers of varying ages, weights and breeding; (2) determine effects of varieties in the diet upon market quality as determined by chemical composition of broilers; (3) determine relationship of specific gravity to each of constituents in (1); and (4) correlate relationships of variations in carcass composition with market quality.
Poultry Indus. 814
- Maine Palatability of Maine Foods. To (1) study quality of fruits and vegetables adapted to soil and climate of Maine, emphasizing seedlings and new varieties developed for Maine; (2) investigate palatability of fresh, stored, and processed Maine vegetables and fruits relative to physical or chemical measurements of quality; and (3) study effects of additives and of packaging during storage on flavor of foods.
Hort., Agron., Agr. Econ., Food Proc., Ent., Bot. and Plant Path. 26

Maine

The Development and Control of Potato Tuber Diseases and Discolorations During Storage and Handling. To determine (1) effect of cultural practices and handling methods on susceptibility of tubers; (2) susceptibility of different varieties; (3) effect of various storage conditions on rot development; (4) effect of chemicals and other control measures applied during storage and handling on rots and discoloration of tubers; (5) effect of rot organisms and physiological discolorations on tissues of tuber by histological methods.

Bot. and Plant Path. 117 Coop. AMS

Md.

Influence of High-Temperature Heat Treatment on Certain Physical and Chemical Properties of Milk. To (1) gain more fundamental knowledge on the chemical reaction occurring in heated milk such as heat-induced flavor, changes in solubility, browning of the product, etc.; and (2) make practical application of the control of heat-induced defects in established dairy products, as well as new dairy products resultant from products development research.

Dairy Husb. G-40

Md.

Evaluation of Possible Off-Flavors Resulting From the Application of Chemicals on Soils and Growing Crops. To (1) develop efficient, uniform methods for evaluating off-flavors in foods, and (2) provide screening apparatus for evaluating new chemicals proposed for use on soils and growing crops.

Hort. QH-58-o (NE-15) (Also see Part 7, Section d.)

Minn.

Factors Affecting Quality Loss in Poultry Meat. 1. The Effectiveness of Methods of Killing, Bleeding and Scalding on Quality Preservation. 2. The Influence of Methods of Pre-cooling and Freezing on Quality Preservation. To study (1) influence of methods of killing on extent of bleeding, ease of feather removal, appearance, and keeping quality of dressed and ready-to-cook poultry; (2) effect of method of bleeding on blood loss and to devise ways to reduce numbers of misbled birds; (3) effect of amount of blood loss on appearance and keeping quality of both fresh and frozen poultry; (4) influence of time and temperature of scald and use of wetting agents and other compounds on ease of feather removal, appearance, and keeping quality; and (5) influence of methods of precooling and freezing on quality preservation.

Poultry Husb. 2309 (NCM-7)

Mo. Market Quality and Yield of Processed Missouri Vegetables.

To (1) correlate factors of raw produce quality as to their resulting influence on market quality of processed vegetables; (2) ascertain time interval at which vegetable crops will remain at optimum maturity for a given processed quality grade; (3) develop objective techniques for measuring factors of quality grade in raw and processed vegetables; and (4) use heat unit method and/or new methods to predict optimum-maturity date.

Hort. 295

N. J.

A Study of the Postharvest Improvement of the Marketable Quality of Fresh and Processed Food. To (1) prevent fruit fly infestations developing on harvested crops such as tomato, pepper, peach, etc., from the time they leave the farm until processed or sold at retail; (2) remove dead bodies of insects adhering to vegetables and which have been killed by insect parasites and entomophagous fungi; (3) study pest problems of roadside fruit and vegetable stands including (a) wasps and bees which puncture skin of fruit, (b) beetles as pests of ripe fruits, (c) insects attracted to stands at night by their lights, etc.; (4) prevent decay and contamination of harvested, perishable food caused by fungi or bacteria until products preserved or consumed; and (5) determine effect of the treatments for decay and disinfection on the quality of the products so treated.

Chem. ES 317

Ohio

Factors Affecting the Quality of Ohio Cider. To (1) determine chemical composition of representative samples of cider made in different locations of the State; (2) determine quality of above cider by organoleptic methods; (3) determine apple variety blend that produces best quality cider; (4) compare quality of cider made in various parts of State with cider made under controlled conditions with viewpoint of making recommendations for improving quality; (5) increase nutritive value of cider; (6) determine acceptability of preservative methods and chemical preservations for cider.

Hort. 155

Tex.

Characterization of Eating Quality of the Meat From Individual Animals. Characterize (1) eating quality of meat from individual animals of known history by using more than one cut and more than one method of cooking; and (2) eating quality of cooked and raw meat from individual animals by associating eating quality with variations in collagen content, amino acid end-groups, and histological structure.

Home Econ., Biochem. and Nutr. 941 (S-10)

(Also see Part 4, Section a.)

- Wis. Quality, Yield, and Cost of Potatoes Prepared in Quantity for Institution Food Service. To (1) determine effect of pre-preparation, preparation, and postpreparation techniques on quality, yield, and cost of potatoes prepared in quantity; and (2) ascertain methods of quantity food preparation and service of potatoes which will improve appearance and palatability and minimize waste.
Home Econ. 987 (NC-31) (Also see Part 13, Section d.)

C. Stored Product Quality

- Ala. The Market Value of Peanuts as Affected by Changes in Chemical and Physical Properties During Storage. To determine (1) effects of storage on chemical, biochemical, and physical changes in peanuts; (2) relationship of initial quality of peanuts to changes during storage; (3) relation of microflora to respiration and associated deteriorative changes in peanuts; and (4) relationship between chemical, biochemical, and physical properties and changes in odor, flavor, and certain nutritive factors affecting market value of peanuts.
Bot. and Plant Path. 570
- Calif. Tenderness of Beef - Changes Due to Treatment During Cold Storage. To study (1) tenderness of beef after varying lengths of cold storage; (2) alternation in pattern of tenderness changes due to removal of muscles from carcass immediately after slaughter; and (3) role of enzymatic activity in altering tenderness of beef.
Home Econ., Anim. Husb. 1663
- Fla. Postharvest Effects of Temperature, Light, Storage Atmosphere and Humidity on Tomato Quality. To study ripening behavior and quality of tomato fruits as affected by postharvest environmental factors emphasizing temperature, light, storage atmosphere, and humidity.
Food Technol. and Nutr. 643
- Ga. The Effect of Various Treatments Upon the Keeping Qualities of Peanuts and Peanut Products in Common and Refrigerated Storage. To determine (1) temperature/time/moisture conditions under which peanuts keep maximum flavor during storage or processing; (2) suitable containers for shelled and unshelled peanuts and peanut products, and determine to what extent quality may be controlled by improved packaging; (3) effectiveness of antioxidants or other additives in preventing staleness and rancidity in peanuts and peanut products; and (4) influence of variety, grade, and prestorage quality of peanuts on processing and on shelf life of peanut products.
Food Proc. 73

Mich.

Postharvest Physical and Chemical Changes in Fruits and Vegetables in Relation to Quality--1. Preharvest Treatment, Harvesting and Curing Practices on Storage and Market Quality of Onions. 2. Nature, Measurement and Control of Substances Causing Bitterness in Carrots, Celery, and Lettuce. 3. Enzyme Relationships and Biochemical Changes Associated with the Rapid Postharvest Deterioration of Strawberries, Muskmelons, Peaches, and Asparagus. To (1) ascertain effects of maturity, preharvest chemical treatments, topping methods, and curing temperatures on such quality factors as firmness, water loss, and dry matter content of onion bulbs and on the color, thickness, and tightness of the outer scales; (2) determine chemical constitution of principle or compound causing bitterness and devise methods for its deterioration, and measure quantitatively the effect of various handling and storage treatments on occurrence, development of disappearance; and (3) determine nature of enzymatic and biochemical changes associated with flesh softening of strawberries and peaches, internal breakdown of muskmelons and darkening and subsequent breakdown of stored or packaged asparagus, and evaluate physical and chemical treatments to retard these disorders.

Hort. 68

Minn.

A Study of Factors Influencing the Keeping Quality and Processing Value of Grain--1. Biochemical and Microbiological Factors Involved in the Respiration, Storage Behavior and Industrial Value of Grains and Their Mill Products. 2. Effects of Methods of Drying Grain on its Processing Value. To (1) determine significance of moisture, temperature, microflora, etc., on industrial value, respiration, heating, and spoilage of grains and their mill products; (2) investigate underlying factors in deterioration of grain and its products in storage; (3) study methods to minimize deterioration in storage; and (4) establish conditions under which grains may be artificially dried with minimum deleterious influence on viability and processing values.

Agr. Biochem. 1504

Minn.

Effect of the Association of Molds and Insects on the Keeping Quality of Stored Grain. To determine if the development of insects within stored grain bulks is associated with or contributes to growth of storage molds that are known to lead to heating and other spoilage of stored grains.

Ent. 1730

Minn.

Cause and Control of Biological and Chemical Deterioration of Agricultural Products in Storage--Fruits. To determine (1) microorganisms or factors responsible for fruit deterioration; (2) main factors governing development of deterioration and nature of deterioration; and (3) chemicals or control methods.

Plant Path. and Bot. 2220-4

- Mo. Time and Temperature Tolerances (Product Climatology) of Meats and Meat Products From Processing Through Distributive Channels to Consumer and Their Relationship to Preferences and Acceptability of the Consumers. To (1) develop required information for predicting storage or distribution life of meat and meat products as influenced by: initial composition and nature, initial and subsequent microbial inoculation, processing treatments, other environmental influences encountered in distribution and handling of these products; (2) develop objective and subjective methods leading to predictive standards for storage and distribution life of these products; and (3) determine influence of variables in (1) as to their acceptability.
Agr. Econ., Anim. Husb., Home Econ. ES 520
- Nebr. Determination of the Causes of Deteriorations of the Thick Egg White and the Yolk Membrane During Storage and Marketing of Shell Eggs. To determine the chemical changes associated with the deteriorative thinning of the thick egg white and relaxation of the yolk membrane during the storage and handling of shell eggs.
Biochem. and Nutr. 463 (NCM-7) Coop. USDA
- N. J. The Decline in Egg Quality, With Particular Reference to Prerrefrigeration Time and Sweating After Refrigeration. To make complete study of use of refrigeration, sweating, and egg quality on farm.
Poultry Husb. 572
- N. Y. The Effects of Controlled Atmosphere Storage on the Keeping (Cornell) Qualities of Apples and Other Fruits. To determine temperature requirements and exact proportions of carbon dioxide and oxygen required for different apple varieties.
Pomol. 136
- N. Y. The Effects of Methods of Postharvest Handling Vegetables, (Cornell) Especially Prepackaging, Chemical Treatments, and Storage on Quality and Consumer Acceptance. To (1) improve methods of prepackaging and storing vegetables; and (2) develop an apparatus for rapid objective measurement of flavor of such vegetables.
Agr. Econ., Veg. Crops 163-3 (NEM-18) Coop. AMS
- Ohio Modified Atmosphere Holding and Storage of Vegetables. To (1) determine optimum concentrations of oxygen and carbon dioxide in which to hold or store highly perishable vegetables, and (2) follow changes in sugar content, ascorbic acid, respiration, weight and appearance of stored products.
Hort. 48

Ohio

Respiration and Associated Factors as Indices in the Determination of the Period of Marketability (Shelf Life) of Fresh (Unprocessed) Fruits and Vegetables. To determine (1) rate of respiration and weight loss of fresh fruits and vegetables under the conditions normally encountered in retail and wholesale distribution; (2) optimum conditions for storing and handling fresh fruits and vegetables through the study of various packages and controlled temperature and humidity ranges; (3) maximum holding period for fruits and vegetables under various controlled conditions; (4) through chemical analysis the changes which occur in fresh fruits and vegetables during the holding period in relation to reducing sugars, total sugars, fiber, or other measurable material changes; and (5) effect of the source of fresh fruits and vegetables (information on growing environment and early postharvest handling) on the respiration rate and quality of these fresh fruits and vegetables.

Hort., Agr. Econ. 60

Va.

Maturity and Physiological Responses of Apples as Influenced by Fertilization, Spray Practices, Environmental Conditions, Harvesting and Handling. To (1) develop maturity standards for harvesting apples for early market and for cold storage; (2) determine influence of weather and cultural practices on quality, condition, and storage life; (3) evaluate influence of spraying fertilization, harvesting and handling practices on quality, condition and storage life.

Hort. 86006

Va.

Storage Life and Physiological Responses of Apples for Fresh and Processed Market as Affected by Fruit Condition and Storage Treatments. To (1) investigate development of scald, internal breakdown and other storage disorders as related to storage conditions and maturity characteristics of fruit at harvest; and (2) determine quality of processed apple products as influenced by physical characteristics and chemical composition of raw fruit, and effect of storage conditions prior to processing.

Hort. 86099

Wash.

Maintenance of Deciduous Fruit Quality During Handling and Storage. To determine (1) controlled atmosphere treatments which will extend the shelf life of fruit after its removal from storage; and (2) when extension becomes effective and how long it is prolonged by treatment.

Hort. 1131

- W. Va. Prevention of Rancidity in Carcass Fats of Turkeys and Hogs.
To (1) study methods to delay development of rancidity in carcass fats of turkeys and hogs; (2) develop and evaluate methods to predict how long carcass fats will keep without becoming rancid under normal storage conditions; and (3) obtain information on movement of vitamin E and other antioxidants from circulatory system to depot fats of living birds and animals.

Agr. Biochem., Poultry Husb. 6

FOOD ACCEPTANCE, PREFERENCE AND MARKETING

General

- Fla. Cost and Factors Affecting the Cost of Marketing Citrus Fruits in Fresh and Processed Forms. Data will be obtained from fifty packing houses and twenty-five processing firms on the cost of handling and processing fruits by type of fruit and container and on methods of operation affecting cost and efficiency.
Agr. Econ. 486 (SM-4) Coop. AMS (Also see Part 14, Section b.)
- Fla. The Characteristics of the Demand for Frozen Orange Concentrate Produced in Florida. To (1) determine characteristics of demand for frozen orange concentrate in limited market area, and (2) determine degree of substitution between frozen orange concentrate and other forms in which Florida oranges are consumed.
Agr. Econ. 664 (SM-4) (Also see Part 14, Section b.)
- Idaho Poultry Products Available in Retail Stores in Idaho and Some Factors that Affect Their Availability, Quality, and Consumer Preference. To (1) study availability of various types and forms of market poultry and of various grades of eggs in retail stores; (2) survey facilities and methods used by retailers for maintaining quality of poultry and eggs; (3) check actual quality of poultry products in retail stores; (4) determine source of poultry products available in retail stores and retailers' reasons for selecting source; and (5) obtain from retailer information regarding consumer preference for various poultry products.
Poultry Husb., Home Econ. Res. 306
- Ill. Structural Relations of Supply, Market Outlets, and Price for Fats and Oils of Animal and Vegetable Origin. To study structure of dynamic relationships between supply, market outlets, and price for animal and vegetable fats.
Agr. Econ. 05-373

Kans. The Marketing of Kansas Potatoes, Melons, Onions, Fruits, and Minor Crops. To (1) determine costs and methods of preparing and marketing Kansas potatoes in relation to consumer's demand and producer's net incomes; (2) determine production and marketing techniques that will increase the demand for Kansas melons; (3) determine new methods of harvesting, storage, merchandising, and market outlets for Kansas onions; (4) determine existing methods of harvesting, processing, storage, and marketing of Kansas fruits; and (5) consider possible reorganization of the marketing procedures used by small producers to stabilize producers' incomes and to reduce marketing costs.

Econ. and Sociol. 257 Coop. USDA

Kans. Improving the Efficiency of Egg and Poultry Marketing in Kansas and Mid-Western Areas. To analyze and study (1) effect of commercial egg-freezing and drying industry upon farm egg prices, egg quality programs, and egg marketing; (2) existing grade buying programs and price spreads (by egg grades), in relation to quality improvement; (3) effect of economic and technological trends and developments, including legislation, upon production and marketing of poultry products; (4) various aspects of egg futures trading; (5) effect of physical factors upon efficiency of farm truck routes operated by firms; and (6) market situation affecting poultry and eggs as basis for price forecasting in these commodities.

Econ. and Sociol. 422 (NCM-14) Coop. AMS
(Also see Part 14, Section e.)

Md. Marketing Maryland Snap Beans. To (1) determine nature and extent of marketing facilities for handling snap beans, both fresh and for canning; (2) examine influence of these organizations and facilities on net returns for snap beans to growers for fresh market outlet and canning; and (3) design methods to improve existing organizations, facilities and practices.

Agr. Econ. and Mktg., Agron., Hort. ES 305

Mass. Costs and Efficiency in Marketing Poultry. To determine (1) live poultry market outlets used by Massachusetts poultrymen in 1952 and 1953; (2) supply areas and marketing channels for buyers of live poultry in Massachusetts; and (3) marketing methods of poultry buyers and their margins in assembly, processing, and distribution.

Econ. 126 (NEM-21) (Also see Part 14, Section e.)

Mass. Marketing of Frozen Cranberry Products. Survey number of packers of above in Northeast with regards to volume, type of product, and containers used, and consumer acceptance.

Food Technol. 130 (NEM-16) (Also see Part 14, Section b.)

- Mich. Determination of the Elasticities of Demand for Specific Meats and Specific Cuts of Meat. To measure price, income, and cross elasticities of demand for specific meats and cuts of meat consumed by members of the Michigan State College Consumer Panel.
Agr. Econ. ES 223 Coop. USDA
- Minn. Food Consumption and New Markets. To (1) measure relationships existing between food consumption and various variables; (2) measure and evaluate possible new markets for food domestically and abroad, and consider and evaluate programs for reaching these markets; and (3) consider and evaluate nonfood uses or markets for agricultural commodities.
Agr. Econ. 1119
- Ohio An Economic Analysis of Grower Contracts for Sweet Corn for Processing. To (1) analyze grower-canner contracts from standpoint of equity to each party and attainment of sound resource use; and (2) construct standards for such contracts that will improve grower and canner aims in efficient growing, processing and selling canned sweet corn.
Agr. Econ. and Rural Sociol. 107 (NCM-13)
(Also see Part 14, Section b.)
- P. R. Shipping and Export Tests with Avocados. To determine (1) which of over fifty varieties and selected clones now considered highly promising are best for export purposes; and (2) most profitable shipping period and to develop maturity standards and packing and shipping techniques with the view of fostering establishment of an avocado export industry.
Agron. 58
- Utah The Availability of Fresh and Processed Fruits and Vegetables in Utah. To determine availability of specific fresh, frozen, and otherwise processed fruits and vegetables in retail food markets in selected areas of Utah.
Foods and Nutr., Agr. Econ. and Mktg. 487 (WM-26)
(Also see Part 13, Section e.)
- Wash. A Study of the Purchase and Use of Food by Everett, Washington Families. To determine (1) patterns of family food expenditure, food production, and consumption in Everett at different income levels and at different stages in family life-cycle; (2) amounts of specified nutrients in food consumer at home and away from home; (3) most commonly used methods of preparation of major food groups; (4) most commonly used food combinations; and (5) effect, if any, of home production and preservation on dietary excellence and cost.
Home Econ. 1132

Marketing Research, Demand and Preference

- Ala. Retailing and Family Buying Practices as Related to the Marketing of Poultry Products. To determine factors in poultry buying as (a) family buying practices used; (b) influence of family characteristics, occupation, income, etc.; (c) kinds and sources of information used by family food buyers and its relation to purchase and use of poultry products; and (d) influence of store offerings and retail marketing services.
Agr. Econ., Home Econ. 561 (SM-13) (Also see Part 13, Section e.)
- Calif. Consumers' Practices in Buying and Preferences for Beef of Varying Degrees of Finish and Disposition of Fat Made by Housewives. To determine whether or not there is enough consumer demand for the less well-finished beef to justify its production in larger quantities than are now generally available.
Home Econ. 1558, ES 275
- Calif. Factors Which Affect the Home Utilization and Consumer Buying Practices of Fresh, Frozen, and Otherwise Processed Fruits and Vegetables Grown in California. Determine ways in which (1) characteristics, prices, and availability of fresh, frozen, and otherwise processed selected fruits and vegetables are grown in California; and (2) characteristics of families and physical equipment available in the home affect the quantities and qualities consumed, the manner in which they are used in the home, and the practices followed in their purchase.
Home Econ. 1712 (WM-26) (Also see Part 13, Section e.)
- Colo. Consumer Purchases and Buying Behavior for Eggs in Retail Groceries in Denver, Colorado. To (1) analyze producer and wholesaler market organization: (a) operations of various agencies, (b) sources of supply, types of eggs handled, and outlets, and (c) allocation of egg supplies by prices and institutional factors; (2) analyze influences on consumer purchases of eggs: (a) by price differentials for characteristic of eggs as size, quality, color, shell conditions, etc., and (b) by different merchandising practices such as method of display, size of consumer unit, quality description, advertising, promotions, grade labeling, consumer information, etc.; (3) analyze consumer buying behavior for eggs: (a) by purchases per customer and frequency of purchase, (b) by type, size, and identification (brand) of package, (c) by buying motives and use made of eggs, and (d) by size of family, income groups, and nationality; and (4) determine prospective balance of production-consumption: (a) relative to changes in market organization, (b) relative to changes in consumer purchases, and (c) relative to indicated consumer buying behavior.
Econ. and Socio. 215

- Colo. Factors that Influence Consumer Acceptance of Beef in Colorado.
To (1) find relationship between methods of grading, packaging, and display upon consumer selection of beef in Colorado; (2) find what standards are used by consumers in their selection of beef; and (3) analyze effects of consumer preferences upon demand for various classes of slaughter cattle in Colorado.
Econ. and Sociol. ES 264
- Hawaii Economic Factors Involved in the Sale of Frozen Fruits and Vegetables and/or Products in Honolulu and Selected Markets in the Western States. To (1) analyze marketing process through which frozen fruits and vegetables and/or products on the market are distributed on the Honolulu market; (2) determine the impact of Mainland-produced frozen fruits and vegetables and/or products on the market for Hawaiian-produced fresh or processed fruits and vegetables and/or products in Honolulu; and (3) determine competitive position of Hawaiian frozen fruit products in Honolulu and Mainland markets.
Agr. Econ. 360 (WM-17) (Also see Part 14, Section b.)
- Iowa Consumer Demand for Pork as Measured by Price and Quality.
To determine (1) present status of consumers' ability to distinguish quality in pork; (2) consumer demand by measuring how much consumers will pay for pork differing in quality; and (3) how well present method of selling pork reflects consumer demand.
Anim. Husb. and Dairy Husb., Agr. Econ. and Rural Sociol., Statis. ES 282
- Ky. Trade and Consumer Acceptance of Kentucky Spring Lambs.
To find (1) if lambs now produced in State are as acceptable to trade and consumers as early lambs produced in other States; (2) if wider geographic distribution of sale of lambs in retail stores would be possible and would increase consumption; and (3) if different merchandising methods would increase consumption of lambs.
Agr. Econ., Anim. Indus. 1007 (SM-7) (Also see Part 14, Section c.)
- La. Consumer Demand for Canned Sweet Potatoes and Okra. To determine nature of present and potential demand for canned sweet potatoes and okra so that growers, canners, and wholesale and retail distributors may improve production and marketing of same.
Agr. Econ., Hort. ES 318

- La. Acceptability of Selected Retail Cuts From Beef Cattle Produced Under Different Managerial Practices. To (1) identify and evaluate characteristics suitable for predicting eating quality of beef; (2) study flavor, tenderness, and general acceptance of beef from cattle fed and bred differently; (3) study flavor, tenderness, and general acceptance as related to fat, moisture, and elastin and collagen content of cut and market grades; and (4) determine relative cooking losses of prefabricated beef cuts from animals produced under different managerial practices and to relate these to chemical and palatability measurements.
Home Econ., Anim. Indus. 943 (SM-19)
(Also see Part 14, Section c.)
- Maine Adaptation of New Potato Varieties to Maine Conditions and Marketing Needs. To evaluate new potato varieties as to their adaptation to Maine growing conditions and their potential place in Maine potato industry.
Agron., Food Proc. 19 Coop. ARS
- Md. Alternative Merchandising and Promotional Methods Affecting Demand for Poultry Meat. To (1) quantitatively assess consumer reaction to various promotional activities and packaging methods designed to increase consumption of poultry meat; and (2) determine feasibility of marketing poultry under different methods of handling and distribution (at dressing plant and retail store levels).
Agr. Econ. and Mkts. A-26-am (NEM-21) Coop. ARS, AMS, FCS
(Also see Part 14, Section e.)
- Mass. The Effect of Plant Practices on Apple Juice as Determined by Consumer Ratings. To determine (1) by survey, status of apple juice plants in Massachusetts, as shown by production figures, plants and equipment facilities, production methods, sources of supply, etc.; and (2) effect of certain plant practices and production methods on juice acceptance, as shown by consumer response.
Food Technol. 129 (NEM-16) (Also see Part 14, Section b.)
- Mo. Human Factors Affecting Food Selection and Consumption Patterns and Their Relationship to the Market. To (1) define and show significance of sociological and psychological factors influencing purchase and consumption of food; (2) evaluate importance of factors as motives affecting food selection in market; and (3) investigate relationship of consumer education to basic motives affecting food selection.
Rural Sociol., Home Econ. 266

- Mo. Consumer Acceptance and Preference for Meat and Meat Products. to (1) observe consumer buying behavior in relation to grade of product, size and kind of cut, and method of packaging; (2) determine effect that price has on grade and cut of meat selected by consumer; (3) determine what consumers look for, preferences that indicate quality to them, and whether these factors are reflected in U. S. Grade Standards; and (4) develop scientific methods for studying consumer behavior.
Agr. Econ., Home Econ. ES 156
- Nebr. Methods and Costs in the Retail Distribution of Meat and Meat Products. To (1) determine methods and practices followed, services performed, volume of meat handled per store; (2) make analyses of costs and margins of retail marketing agencies at various sales volumes and by various methods; (3) study demand for meat in various forms and packages; and (4) determine effectiveness of pricing mechanism in expressing consumer-preference to livestock producers.
Agr. Econ. 420 (NCM-9) Coop. USDA (Also see Part 14, Section c.)
- N. C. A Study of Consumer Acceptance of Ice Cream and Other Frozen Desserts as Affected by the Utilization of Fruits and Nuts, Types of Flavoring Materials, Composition and Methods of Processing. To determine (1) influence of variety and method of preparation of fruits and nuts and means of incorporation into ice cream and other frozen desserts; (2) consumer acceptance of desserts prepared from fruit purees or fruit juices; (3) limits of variations in composition of desserts by consumer preference; and (4) effect of various processing methods on properties of frozen dessert mixes and the finished products.
Anim. Indus., Hort. HM-8
- Okla. Consumer Demand for Eggs, Dressed Chickens, and Beef as Measured by Price and Quality. To (1) determine preference of consumers for different quality characteristics of beef, eggs, and dressed chickens; (2) estimate monetary values that consumers place on preferences for quality characteristics of beef, eggs, and dressed chickens; and (3) show how method of selling said produce reflects consumer preferences to producer.
Agr. Econ., Poultry Sci. ES 457
- Oreg. Investigations and Standardization of Subjective Methods for Evaluation of Food Quality. To (1) evaluate subjective methods now being used for testing quality of food products; and (2) develop improved procedures for standardizing subjective methods of food testing.
Home Econ. 138

- Oreg. Comparison of Small Preference Panels with a Household Consumer Panel. To (1) compare "expert" panels of 10 to 20 members; (2) compare student panels of 100 to 150 members; (3) compare household consumer panel of 200 city families in western Oregon for their preferences on 12 Oregon food products; and (4) evaluate effectiveness of first two panels in estimating preferences of consumer panel.
Food and Dairy Technol. 253
- Oreg. Relationships Between the Qualities of Fresh Beef Cuts Consumers Prefer and the Qualities of Those Cuts Available in Retail Stores in Oregon. To determine extent to which quality of fresh beef cuts offered to Oregon consumers in retail markets meets the desires of these consumers as shown by preference studies.
Food and Dairy Technol. ES 511
- Pa. Merchandising Agricultural Products - A. Merchandising Poultry Products. B. Measurement of Consumer Responses to Retail Food Merchandising Practices. C. Consumer Demand for Lean and Fat Type Pork Cuts. To (1) determine concepts of want-satisfying attributes associated with variations in sales and consumption of poultry products; (2) measure effects of various methods of processing, packaging, and merchandising on sales; (3) measure effects of different types of consumer education and advertising on sales; (4) test effect of retail food merchandising practices on returns to retailers, other trade agencies, and producers; (5) determine price differentials consumers will be willing to pay between pork cuts from leaner and fatter grades; (6) determine rates of movement for pork cuts from different grades of carcasses at varying price differentials; and (7) appraise price consequences for carcass and live grades of hogs when differentials are paid for pork cuts from those grades.
Agr. Econ. and Rural Sociol. 1172-A, -B, -C
- Pa. The Palatability Panel as a Tool for Determining Quality and Consumer Preference of Food. To (1) develop techniques and procedures for selecting, training, and conducting analytical taste panels; (2) find methods of increasing objectivity in an analytical taste panel; and (3) determine relationship between analytical taste panel and consumer acceptance testing.
Home Econ. 1257 (NE-15) (Also see Part 7, Section d.)
- Pa. Factors Affecting Acceptance of New Food Products. To (1) determine consumer attitudes related to acceptance of new food products; and (2) analyze selected variables associated with attitudes concerning acceptance of new food products.
Agr. Econ. and Rural Sociol. 1340

- S. C. Retailing and Family Buying Practices as Related to the Marketing of Fruits and Vegetables. To determine (1) influence in purchase of selected fruits and vegetables of (a) family buying practices, (b) family characteristics such as occupation, income, etc., and (c) offerings and services of retail outlets; and (2) kinds and sources of information used by food buyers and how these relate to purchase and use of selected fruits and vegetables.
Home Econ. 54 (SM-13) (Also see Part 13, Section e.)
- S. C. Consumer and Trade Acceptance of Riboflavin-Enriched and Other Rice. To determine (1) trade acceptance of packaged rice enriched with riboflavin to various levels and by various methods of application, coated with talc and glucose, slightly undermilled; and (2) consumer preference for cooked rice treated in (1) above.
Agr. Econ. and Rural Sociol., Agr. Chem. 423
- Tex. Consumer Preference and Motivations in Buying Poultry Products in Relation to Product Characteristics and Merchandising Methods. To (1) determine motivating factors influencing consumer preferences among the different kinds of poultry products, with respect to different characteristics of the product as skin color, and in relation to type of packaging at retail level; and (2) appraise effectiveness of merchandising methods in retail stores influencing consumers to buy poultry products.
Agr. Econ. and Sociol., Poultry Sci. 1101 (SM-15)
(Also see Part 14, Section e.)
- Tex. Consumer Acceptance of Prepackaged Frozen Retail Cuts. To determine (1) most desirable package and processing methods for maximum attractiveness from frozen prepackaged retail meat cuts; and (2) consumer response to frozen prepackaged retail meat cuts.
Agr. Econ. and Sociol., Home Econ. 1012, ES 365
- Tex. Factors Affecting Consumption of Lamb in Texas. To (1) determine influence of selected racial, income, and environmental factors upon individual consumption and attitude toward lamb; (2) determine knowledge of homemakers concerning grades, variety of cuts and recommended methods of preparation of lamb; (3) determine Texas retail practices and attitudes of meat retailers toward lamb; (4) determine influence of price and availability of other meats on lamb consumption; and (5) analyze potential price effects of increased lamb consumption in Texas.
Agr. Econ. and Sociol., Anim. Husb. ES 367
- Tex. Consumer Buying Habits, Brand Preferences, and Store Distribution of Poultry Products in Houston, Dallas, Austin, and Bryan-College Station. To determine (1) poultry products available; (2) consumer buying habits; and (3) brand preferences for poultry products.
Agr. Econ. and Sociol., Home Econ., Poultry Sci. 1013, ES 371

Tex. Consumer Demand for and Development of Improved Grades and Standards for Pecans. To (1) determine variation in price-quality and grade relationship for in-shell pecans as sold under current marketing practices in retail stores; (2) develop improved or new standards and grades designed to eliminate consumer uncertainty as to quality of pecans purchased on in-shell basis, improve returns to growers in relation to quality of pecans produced, and improve marketing practices; and (3) measure consumer demand and preference for in-shell pecans sold on improved grade basis in retail stores compared to previous methods of selling and in relation to pecans sold on shelled basis.

Agr. Econ. and Sociol., Home Econ., Hort. 1014, ES 378

Va. Analysis of Decision-Making Factors Employed by Consumers in Determining the Quality and Quantity of Beef Purchases. To (1) identify and evaluate major decision-making factors used by consumers in selection and purchase of beef; (2) evaluate consumers' knowledge of selected physical or grade characteristics; (3) determine consumers' satisfaction or dissatisfaction with respect to kinds and quality of beef readily available to them and retail merchandising techniques in local markets; (4) determine kinds, qualities, and form in which beef is sold in selected areas; and (5) determine kinds and quality beef purchased by institutions and their reasons.

Agr. Econ. and Rural Sociol. 93908 (SM-19) Coop. AMS
(Also see Part 14, Section c.)

Wash. Consumer Purchases and Acceptance of Eggs Under Various Merchandising Practices. To (1) determine effect on volume of egg sales due to price differentials among selected characteristics of eggs such as quality, size, shell condition, color, and effect of different merchandising practices in retail stores; and (2) evaluate extent to which consumers are responsive to variations in qualities of eggs.

Agr. Econ., Poultry Sc. 1200 (WM-18) Coop. AMS
(Also see Part 14, Section e.)

Wash. Consumer Acceptance of Beef. To determine (1) consumer acceptance of beef of different quality characteristics; (2) importance to consumer of quality characteristics of beef for different methods of preparation; and (3) willingness of consumer to pay a premium for high-quality beef.

Agr. Econ., Anim. Sci., Home Econ. ES 308

Wash. Consumer Purchases and Acceptance of Poultry Meat Under Various Merchandising Practices. To (1) evaluate present grading factors for pan-ready broilers in terms of consumer acceptability of cut-up broilers; (2) evaluate extent of consumer response to variations in qualities of poultry meat; and (3) determine effect of different merchandising practices in retail stores on volume of poultry meat sales.

Agr. Econ., Home Econ., Poultry Sci. 1227, ES 309

- Wyo. Consumer Acceptance and Evaluation of Beef From the Feed-Lot and the Range. To (1) determine which of two techniques is more satisfactory for obtaining consumer acceptance information; (2) determine consumer acceptance of different grades of beef from standpoint of price, grade, amount of fat, and other physical characteristics; (3) compare lab evaluation of certain cuts of beef of different grades with expressed consumer preference of these cuts; and (4) compare compatability of standards used by the consumer in buying meat with standards used in grading.
Agr. Econ., Anim. Prod., Home Econ., Chem. ES 266
- Marketing Organization, Function and Costs
- Del. Quality Losses of Broilers in the Marketing Channels and Association Between Quality and Price. To (1) measure relation of processing techniques and marketing practices to quality losses between farm and processing plant and within processing plant, between processor and wholesaler, between wholesaler and retailer, within retail stores; and (2) determine interrelation of quality and price at processor, wholesale, and retail level.
Agr. Econ. 31-AE
- Ga. Marketing Farm Products Through Frozen Food Facilities. To determine adjustments needed in functions and services of freezer locker plants to increase their usefulness in marketing agricultural products.
Agr. Econ. M-111
- Ill. Methods and Costs in the Retail Distribution of Meat and Meat Products. To determine methods and practices used, services performed, volume of meat handled per store, relation of meat sales to total sales, and to relate these factors to cost and relative efficiencies of retailing meat under different circumstances.
Agr. Econ. 05-365 (NCM-9) Coop. USDA (Also see Part 14, Section c.)
- Ind. Methods and Costs in the Retail Distribution of Meat and Meat Products. To determine (1) costs and margins of handling meat through various retail units; (2) influence of methods of merchandising and other factors on costs and margins; and (3) basis upon which retail meat prices are established and relationship between wholesale meat prices and retail prices.
Agr. Econ., Anim. Husb. 568 (NCM-9) (Also see Part 14, Section c.)

- Ky. Distribution of Meat and Meat Products in Kentucky. To (1) study recent developments in meat distribution within State, finding where supplies originate and how distributed to the stores; (2) determine methods and practices followed, services performed, volume handled per store, and relation of meat sales to total sales, relating these factors to efficiency of wholesale and retail meat distribution under various distributive conditions; (3) study consumer demand for meat and meat products in fresh, cured, prepackaged and other forms and determine factors which affecting demand; and (4) determine price relationships of various classes, weights, grades, and cuts of meat at retail level and evaluate effectiveness of pricing mechanism in relaying consumer preferences to livestock producers.
Agr. Econ. 1001 (NCM-9) Coop. USDA (Also see Part 14, Section c.)
- Maine Cost and Returns in the Production of Sweet Corn, Peas, and Snap Beans for Processing. To (1) study inputs and outputs, and costs and returns in producing sweet corn, peas, and snap beans; (2) describe farm organization patterns and management practices; and (3) suggest adjustment to lower costs and increase returns.
Agr. Econ. and Farm Mgt., Agron. 60
- Md. Marketing Margins as Associated with Expansion or Curtailment in Consumer Services. To (1) compare retail costs of wheat and corn premixes with retail costs of ingredients used by housewife in preparing a homemade mix; (2) determine and evaluate effect of various consumer packages and package innovations on consumption and demand, and learn reasons for consumer selection of premixes vis-a-vis commercially baked and home prepared products; and (3) compare costs and services rendered on comparable items today and twenty years ago.
Agr. Econ. and Mktg., Home Econ. A-26-av Coop. AMS
- Mich. Analysis of Actual Changes in Food Patterns as Family Incomes Vary. To (1) compare family purchases of food groups in MSU panel before and after changes in income, with adjustments for changes in family composition; (2) compare differences with those found between income groups in a cross-section of the panel during a period of time; and (3) use information to develop and evaluate adjustors of purchases to be used in the University of Minnesota-sponsored contributing project on demand expansion.
Agr. Econ. 843 (IRM-1) (Also see Part 2, Section a.)

Mich.

Studying the Economic and Technical Problems of Marketing Prepackaged Fresh and Frozen Meat. To conduct economic and technical studies on processing, packaging and distribution of fresh and frozen meat to (a) determine best methods for speeding desirable color development and maintaining it in consumer packages suitable for freezing, storing, transporting, and displaying in retail stores; (b) test suitable wrapping materials and develop processing methods to produce frost-free packaged meats; (c) determine factors affecting consumer acceptance of frozen meats; and (d) identify and solve economic and technical problems of centralized prepackaging.

Agr. Econ. ES 155 Coop. AMS

Minn.

Methods and Costs in the Retail Distribution of Meat and Meat Products. To (1) determine methods and practices, services performed, volume of meat handled per store, relation of meat sales to total sales, and to relate these factors to costs and relative efficiencies of retailing meat under different circumstances; (2) make detailed analyses of costs and margins of retail marketing agencies and other factors which affect operational efficiency of retail marketing agencies distributing meat at various sales volumes and by various methods; (3) study demand for meat and meat products in fresh, cured, prepackaged and other forms and factors affecting demand; and (4) determine price relationships of various classes, weights, grades, and cuts of meat at retail level and evaluate effectiveness of pricing mechanism in transmitting consumer preference back to livestock producers.

Agr. Econ. 1121 (NCM-9) Coop. AMS (Also see Part 14, Section c.)

Minn.

Factors Affecting Quality Loss of Minnesota Eggs in Market Channels. To (1) establish degree of variability and extent of quality loss in shell eggs of known history and initial quality under both ideal and unfavorable holding conditions; (2) determine characteristics of an egg which enable it to better maintain its high initial quality in market channels by correlating quality loss with initial interior quality, shell quality, season, and source of eggs; (3) obtain a measure of the economic loss incurred by shippers, receivers, and other segments of the industry resulting from failure of shell eggs to undergo a uniform and a minimum amount of change while in market channels; and (4) secure information on objective measurements of egg quality, sampling techniques, and prediction tests for keeping quality.

Poultry Husb. 2313

- Mo. Marketing of Meat and Meat Products.—a. Sources of the Meat Supplies of Missouri Consumers. To (1) determine extent of local frozen storage as a source of meat supply; (2) determine importance of local slaughter as a source of meat supply; (3) determine importance of farm slaughter; (4) determine if possible apparent per capita consumption of meat in Missouri by kinds of meat and source of supply; and (5) establish certain essential background information for further work.
Agr. Econ. 150-a (NCM-9) (Also see Part 14, Section c.)
- Mo. Marketing of Meat and Meat Products.—b. Methods and Costs of Retail Distribution of Meat and Meat Products. To determine (1) methods and practices in meat retail stores of various sizes; (2) amount of services performed; (3) volume of meat handled per store and relation of meat sales to total sales; and (4) relation of above factors to costs and relative efficiencies of retailing meat under various different circumstances found in retail meat industry.
Agr. Econ. 150-b (NCM-9) (Also see Part 14, Section c.)
- Mo. Economic and Technical Feasibility of Retail Distribution of Frozen Meats. To (1) determine technical feasibility of frozen meat distribution; (2) determine efficient layout, product flow in central plant and retail store; (3) compare costs of retailing meats in frozen form with those of fresh meats; (4) study economic feasibility of merchandising retail meat cuts in frozen form through regular retail channels and bulk sales to consumers; and (5) determine consumer acceptance and preference for the frozen product.
Agr. Econ., Anim. Husb., Home Econ. ES 363 Coop. AMS
- Pa. Merchandising of Processed Mushrooms. To determine (1) consumer attitudes associated with level of consumption of processed mushrooms; (2) extent of consumer knowledge concerning potential ways of using processed mushrooms; (3) effect of various merchandising practices, developed from findings, above, on sales of processed mushrooms.
Agr. Econ. and Rural Sociol. 1172-E (NEM-16)
(Also see Part 14, Section b.)
- Wis. Economic Aspects of Cheese Production and Marketing.— A Reducing Costs of Cheese Manufacturing and Curing. To reduce the costs of manufacturing and curing of cheese through (a) better plant and business organizations, and (b) improved manufacturing methods.
Dairy and Food Indus. 733-A
- Wis. The Effect of Marketing and Home Handling Practices on Selected Frozen Foods. To study effects of marketing and home handling procedures on eating quality and bacteriological quality of selected frozen foods.
Home Econ. 986

REGIONAL PROJECTS

NCM-7

Maintaining Quality of Poultry Products in Market Channels.

To (1) study the basic causes of deterioration in quality of eggs and poultry meat during the marketing process; (2) develop methods that are commercially feasible for maintaining or improving the initial quality of poultry products while in channels of trade; and (3) develop laboratory and commercial methods for accurately measuring and/or predicting quality and quality losses in eggs and poultry meat in market channels.

Cooperating stations: This section: Ind., Mich., Minn., Nebr., Ohio, and S. Dak. Section b: Iowa, Kans, and Mo.

NEM-18

Quality Maintenance and Prepackaging in Marketing Fresh and Processed Vegetables. To (1) develop improved methods of handling, packaging and storage in order to maintain quality in marketing fresh vegetables; (2) develop objective measures of quality for fresh and processed vegetables; (3) determine consumer and trade acceptance and preference for specific marketing practices and their results.

Cooperating stations: This section: Md., Mass., N. J., and N. Y. (Cornell). Section b: N. J. (Also see Part 7, Sec. d, N. J.; Part 13, Sec. d, Mass.; Part 14, Sec. b, N. J., and N. Y. (Cornell); Part 22, Sec. a, Md., Md., Mass., N. Y. (Cornell), and R. I.)

LIST OF COMPILATIONS OF FEDERAL-GRANT RESEARCH PROJECTS
AT STATE AGRICULTURAL EXPERIMENT STATIONS

ARS-23-8:		
Part :	Subject-Matter Area	Title of Section
Numbers :		
1	Agricultural Chemistry	Agricultural Chemistry
2	Agricultural Economics	a. Prices, Incomes, & General Studies of Com- modities & Industries b. Farm Management c. Land Economics d. Farm Finance & Taxation
3	Agricultural Engineering	a. Land & Water Use & Develop- ment b. Power Machinery & Equipment c. Farm Structures & Materials
4	Animal Husbandry	a. Beef Cattle b. Sheep & Goats c. Swine
5	Dairy Husbandry	Dairy Cattle
6	Dairy Technology	Dairy Technology
7	Entomology & Economic Zoology	a. Field Crop Insects b. Fruit, Nut & Vegetable Insects c. Miscellaneous Insects & Economic Zoology d. Insecticides
8	Field Crops	a. Cereal Crops b. Oil, Fiber, Tobacco & Sugar Crops
9	Food Science & Technology	a. Food Chemistry, Micro- biology, Sanitation & Public Health b. Food Engineering, Processing, Product and Process Develop- ment, Utilization and Waste Disposal c. Food Quality & Standards, Acceptance, Preference, & Marketing
10	Forage Crops, Pastures & Ranges	Forage Crops, Pastures & Ranges
11	Forestry	Forestry

ARS-23-8:		
Part :	Subject-Matter Area	Title of Section
Numbers :		
12	Fruits & Nuts	Fruits & Nuts
13	Home Economics	a. Human Nutrition b. Housing c. Clothing & Textiles d. Foods-Consumer Quality & Utilization e. Household Economics & Management
14	Economics of Marketing	a. Field Crops b. Fruits & Vegetables c. Livestock, Meats & Wool d. Dairy Products e. Poultry & Poultry Products f. Forest Products & Ornamental & Drug Plants g. Cross-Commodity & Functional Studies
15	Meteorology	Meteorology
16	Ornamental & Drug Plants	Ornamental & Drug Plants
17	Plant Pathology & Bacteriology	a. Plant Pathology, Botany, & Diseases of Miscellaneous Crops b. Diseases of Field Crops c. Diseases of Fruit Crops d. Diseases of Vegetable Crops
18	Plant Physiology & Nutrition	Plant Physiology & Nutrition
19	Poultry Industry	Poultry Industry
20	Rural Sociology	Rural Life Studies
21	Soils	a. Soil Chemistry & Microbiology b. Soil Fertility, Management & Soil-Plant Relationships c. Soil Physical Properties, Conservation & Classification
22	Vegetables	a. Vegetable Crops b. Potatoes
23	Veterinary Science	Veterinary Science
24	Weeds	Weed Control

